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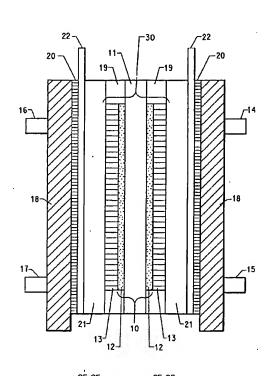
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#### (54) Title: TRIFLUOROSTYRENE CONTAINING COMPOUNDS GRAFTED TO BASE POLYMERS



(57) Abstract: A fluorinated ion exchange polymer prepared by grafting a monomer on to a base polymer, wherein the grafting monomer is selected from the group consisting of structure 1a, structure 1b and mixtures thereof, (INSERT 1a and 1b HERE) wherein Y is selected from the group consisting of -R<sub>F</sub>SO<sub>2</sub>F (sulfonyl fluoride), -R<sub>F</sub>SO<sub>3</sub>M (fluorosulfonic acid or salt), R<sub>F</sub>SO<sub>2</sub>NH<sub>2</sub> (fluorosulfonamide), and -R<sub>F</sub>SO<sub>2</sub>N(M)SO<sub>2</sub>R<sup>2</sup><sub>F</sub> (imide); wherein M is H, an alkali cation, or ammonium; and R<sub>F</sub> and R<sup>2</sup><sub>F</sub> groups are perfluorinated or partially fluorinated, and may optionally include ether oxygens; and n is between 1 and 2 for 1a, or n is between 1 and 3 for 1b. These ion exchange polymers are useful in preparing catalyst coated membranes and membrane electrode assemblies used in fuel cells.

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